

Database Nation: The Death of Privacy in the 21st Century. By Simson Garfinkel. O'Reilly, Sebastopol, CA. (2000). 312 pages. \$24.95.

Contents:

1. Privacy under attack. 2. Database nation. 3. Absolute identification. 4. What did you do today? 5. The view from above. 6. To know your future. 7. Buy now! 8. Who owns your information? 9. Kooks and terrorists. 10. Excuse me, but are you human? 11. Privacy now! Annotated bibliography and notes. Acknowledgements. Index.

Complexity and Approximation: Combinatorial Optimization Problems and Their Approximability Properties. By G. Ausiello, P. Crescenzi, G. Gambosi, V. Kann, A. Marchetti-Spaccamela and M. Protasi. Springer-Verlag, Berlin. (1999). 524 pages. \$59.95.

Contents:

1. The complexity of optimization problems. 2. Design techniques for approximation algorithms. 3. Approximation classes. 4. Input-dependent and asymptotic approximation. 5. Approximation through randomization. 6. NP, PCP and non-approximability results. 7. The PCP theorem. 8. Approximation preserving reductions. 9. Probabilistic analysis of approximation algorithms. 10. Heuristic methods. A. Mathematical preliminaries. B. A list of NP optimization problems. Bibliography. Index.

State-Space Search: Algorithms, Complexity, Extensions, and Applications. By Weixiong Zhang. Springer-Verlag, New York. (1999). 201 pages. \$49.95.

Contents:

Preface. 1. State-space search for problem solving. 2. Algorithms for combinatorial optimization. 3. Complexity of state-space search for optimal solutions. 4. Computational complexity transitions. 5. Algorithm selection. 6. A study of branch-and-bound on the asymmetric traveling salesman problem. 7. State-space transformation for approximation and flexible computation. 8. Forward pruning for approximation and flexible computation, Part I: Single-agent combinatorial optimization. 9. Forward pruning for approximation and flexible computation, Part II: Multiagent game playing. A. Basic concepts of branching processes. B. Mathematical notation. C. List of algorithms. References. Index.

Practical Use of Mathcad®: Solving Mathematical Problems with a Computer Algebra System. By Hans Benker, translated by Anthony Rudd. Springer-Verlag, Berlin. (1999). 505 pages. \$54.

Contents:

Preface. 1. Introduction. 2. Installation of MATHCAD. 3. MATHCAD user interface. 4. MATHCAD worksheet. 5. Electronic books. 6. Exact and numerical calculations. 7. Numbers. 8. Variables. 9. Data management. 10. Programming. 11. Dimensions and units of measure. 12. Basic arithmetic operations. 13. Transformation of expressions. 14. Sums and products. 15. Vectors and matrices. 16. Equations and inequalities. 17. Functions. 18. Graphics features. 19. Differentiation. 20. Integrations. 21. Infinite series and products. 22. Vector analysis. 23. Differential equations. 24. Transformations. 25. Optimization. 26. Probability. 27. Statistics. 28. Summary. Bibliography. Index.

Complexity: Life at the Edge of Chaos, Second edition. By Roger Lewin. The University of Chicago Press, Chicago. (1999). 234 pages. \$28, £20 (cloth); \$14, £10 (paper).

Contents:

Acknowledgements. Preface. 1. The view from Chaco Canyon. 2. Beyond order and magic. 3. Edge of chaos discovered. 4. Explosions and extinctions. 5. Life in a computer. 6. Stability and the reality of Gaia. 7. Complexity and the reality of progress. 8. The veil of consciousness. 9. The view from the edge. Afterword: On the edge in the world of business (Roger Lewin and Birute Regine).

Object-Oriented Technology and Computing Systems Re-Engineering. Edited by H. Zedan and A. Cau. Horwood Publishing, Chichester. (2000). 197 pages. \$49.95.

Contents:

Preface. 1. OO design methodology for hybrid systems (Viktor Friesen, André Nordwig and Matthias Weber). 2. Design patterns and formal development (Kevin Lano and Stephen Goldsack). 3. Devising coexistence strategies for objects with legacy systems (Gerardo Canfora, Aniello Cimitile, Andrea De Lucia and Giuseppe A. Di Lucca). 4. Object-oriented model for expert systems implementation (F. Alonso Amo, J.L. Fuertes, L. Martínez, C. Montes and R. Navajo). 5. Re-engineering requirements specifications for reuse (Wing Lam). 6. Object-oriented development of X-ray spectrometer software (Tuomas Ihme). 7. Pre-processing COBOL programs for reverse engineering (Jan Kwiatkowski, Ireneusz Puchalski and Hongji Yang). 8. Agent oriented programming language LASS. (Mihal Badjonski, Mirjana Ivanović and Zoran Budimac). 9. Fair objects (Paul Gibson and Dominique Méry). 10. Systems of systems as communicating structures (Vadim Kotov). 11. Suitability of CORBA as a heterogeneous distributed platform (Amelia Platt and Paul McKee). 12. Using OO design to enhance procedural software (Mandy Chessell and Franco Civello). 13. Reengineering procedural software (Sagar Pidaparathi, Paul Luker and Hussein Zedan).